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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,167	04/08/2004	Dong-Hyuk Chae	4591-390	2938

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EXAMINER

WENDLER, ERIC J

ART UNIT PAPER NUMBER

2824

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/822,167

Applicant(s)

CHAE ET AL.

Examiner

Eric Wendler

Art Unit

2824

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 4/8/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Search History.

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. KR 2003-21969, filed on April 8, 2003, and parent Application No. KR 2003-79510, filed on November 11, 2003.

### *Drawings*

2. **Figures 1-4** should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: **Fig. 7, FAS; Figs. 9A-9B, R1-R2**. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

4. Applicant is reminded of the proper language and format for an abstract of the disclosure. The language should be clear and concise and should not repeat information given in the title. **It should avoid using phrases which can be implied,** such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-3, 5, 7-9, 11, 13-15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA) in view of the US Patent to Fling (4,654,695).**

7. **Regarding claims 1-3, 5, 7-9, 11, 13-15, and 17, the applicant discloses as prior art in the Background of the Invention section a memory system having a plurality of memory chips comprising a memory cell array (60) constructed of a plurality of sectors; a register (10) to store a loaded sector information about a sector to be erased; a counter (30) to generate an address including a chip information and a sector information and that generates addresses in sequence; a control circuit (40) to generate an address count-up signal with reference to that sector information corresponds to a sector to be erased that has chip selection information to check the sector information**

when the chip selection information is identical to the chip information of the counter; and a core driver (50) that carries out an erase operation for a corresponding sector in response to the erase enable signal (paragraphs 0008 and 0011). The AAPA does not disclose an address clock driver to generate an address clock signal in response to the disclosed current chip signal and address count-up signal, an output of this address clock driver conditioned at a high impedance state when the chip selection information is different from the chip information of the counter, a first bus to transfer control signals, a second bus to transfer address and data signals, or a plurality of memory chips connected to these buses. Fling teaches, in Fig. 1, an address clock driver (26) that generates an address clock signal. He also teaches that this address clock signal provides a high impedance state when it is in a low state to a first bus that transfers control signals to a memory (22), and a second bus that that transfers the address and data signals to a memory (22). It would have been obvious to one of ordinary skill of the art at the time the invention was made to use the circuitry and signals described by Fling to connect to a plurality of memory chips, as it is obvious that if you can use the circuitry to connect to one chip, you can connect to a plurality of chips. It would also be obvious to use the circuitry and signals described by Fling in the system described by the AAPA for the purpose of more accurately controlling the writing and erasing of data to certain addresses.

**8. Claims 4, 10, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA) in view of the US**

**Patent to Fling (4,654,695), and further in view of the US Patent to Peri et al (6,904,400).**

9. **Regarding claims 4, 10, and 16, the AAPA and Fling teach all the claimed elements but fail to teach where the chip selection information is established by a hard-coded option. Peri teaches, in claims 15 and 24, a state machine or control circuit that can load addresses, which can be hard-coded, into a register. It would have been obvious to one of ordinary skill of the art at the time the invention was made to implement the hard-coded option taught by Peri into the system taught by the AAPA and Fling because it would give the user the option to tell the system directly which addresses he wanted to put the data into.**

10. **Claims 6, 12, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA) in view of the US Patent to Fling (4,654,695), and further in view of the US Patent to Fukumoto (5,488,587).**

11. **Regarding claims 6, 12, and 18, the AAPA and Fling teach all the claimed elements as discussed above but fail to teach the chip information of a counter corresponding to a most significant address bit. Fukumoto teaches, in column 16, lines 42-44, chip information of a counter corresponding to a most significant address bit. It would have been obvious to one of ordinary skill of the art at the time the invention was made to combine the teachings of Fukumoto with the system of the AAPA and Fling because it is an effective way of determining the correct address in which to write or erase the data.**

12. **Regarding claims 19-21**, they encompass the same scope of invention as that of claims 1-18 except they draft the invention in method format instead of apparatus format. The AAPA and Fling teach all the circuitry necessary to erase multi-sectors in a multi-chip package. Peri and Fukumoto teach all the necessary options needed to navigate the address sectors in an orderly and accurate fashion. The aspects of the invention contained in claims 19-21 are therefore rejected in method format for the same reasons claims 1-18 were rejected in apparatus format, as set forth in the above paragraphs of the office action.

### ***Conclusion***

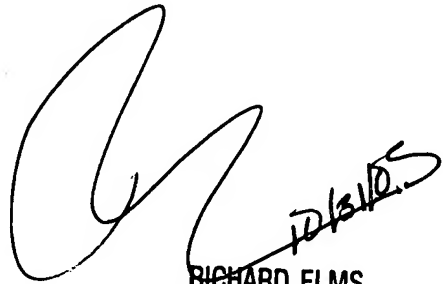
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lin (5,526,316) discloses a memory system that uses address clock signals to input to a counter to generate address and sector information. Schofield (5,570,381) discloses the use of the most significant address bit in a counter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Wendler whose telephone number is (571) 272-5063. The examiner can normally be reached on Monday - Friday 8AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on (571) 272-1869. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EJW  
10/27/05

A handwritten signature in black ink, appearing to read 'R. Elms', is written over the printed name and title.

RICHARD ELMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800